species of bacteria, and allayed fever which had been produced by previous injections of the pyrotoxin. The same result was obtained when fever-producing bacteria of various species were inoculated. Furthermore, the antipyretic and protective action of the blood serum of immunized animals was found to last for a considerable time after the injection.

If further experiment shall confirm these results they are of great importance, for they are confirmatory of the idea advanced by Centanni in his former paper, that the fever-producing factor of the bacterial poisons is the same in all species, and they suggest that in the treatment of the fever of infectious diseases the blood serum of animals made immune to the pyrotoxic action of any species of bacteria may prove a most valuable therapeutic agent, not only by lowering the temperature but by ameliorating the general condition of the patient. The authors are now testing the correctness of this inference upon patients suffering from febrile diseases.

PNEUMATURIA.

HEYSE (*Zeitschr. f. klin. Med.*, 1894, xxiv. 130) records an interesting case of gas-formation in the bladder of a patient suffering from myelitis with retention of urine. After catheterization had been practised for some time, gas was noticed to escape through the catheter, and percussion elicited a tympanitic note over the bladder. The autopsy not long afterward disclosed gas in considerable quantity in the bladder, ureters, and in the substance of the kidneys. Cultures showed the presence of a short bacillus resembling in all particulars, except its virulence in animals, the bacterium lactis aërogenes of Escherich. Introduced under the skin, into the joints and pleural and abdominal cavities, and in artificial cultures, its growth was always accompanied by gas-formation. It is believed by Heyse to have been introduced with the catheter into the bladder in his case, and to have been the cause of the pneumaturia.

PEPTONURIA.

THE occasional occurrence of peptone in the urine has long been recognized, but its exact diagnostic and prognostic importance has been uncertain. With a view to throwing some light upon this subject, ROBITSCHEK (*Zeitschr. f. klin. Med.*, 1894, xxiv. 556) has examined carefully the urine of 121 patients suffering from various disorders, with the result of finding peptone in the urine in 60 of them. He believes that peptonuria occurs physiologically only during the puerperium, and that its occurrence at any other time is to be regarded as pathological. As a rule, it is indicative of tissue degeneration, as the result of which peptone finds its way into the blood and is excreted by the kidneys. The mere presence of the peptone in the blood and in the urine seems to have no special symptoms associated with it, and as it occurs in a great variety of conditions of which tissue-degeneration is a part, its diagnostic significance is thought to be but slight.

THE ETIOLOGY OF ACUTE ARTICULAR RHEUMATISM.

A NUMBER of the clinical features of acute articular rheumatism have suggested to the minds of many the probability that it belongs to the ever-growing class of infectious diseases. Its acute onset and febrile and selflimited course, its complications, and the frequent involvement of the joints as a complication of many infectious diseases, are regarded as supporting this theory. The careful investigation of a typical case of the disease by **SAHLI** (*Deutsches Archiv f. klin. Med.*, 1893, p. 451), has added the evidence of the bacteria themselves. Endocarditis, pericarditis, and pleurisy were associated with the joint lesions. There was no suppuration. Bacteriological examination disclosed the presence in all the lesions of a micrococcus, identical morphologically and culturally with the staphylococcus citreus, but of very low virulence when inoculated into animals as compared with it. As there was no ground to suppose a mixed infection in this case, Sahli regards this germ as its exciting cause. He is in doubt whether the germ discovered is a distinct species or whether it is merely a staphylococcus citreus of degenerate virulence. He is inclined to the latter view because of the frequent association of rheumatism and endocarditis, whose intimate relationship to the pyogenic cocci has been repeatedly shown.

A note appended to the report of this case states that in several other cases more recently examined, similar cocci of low virulence have been found.

THE RESISTANCE OF TYPHOID BACILLI TO DRYING, AND THE POSSIBILITY OF THEIR DISSEMINATION THROUGH THE AIR.

UFFELMANN (*Centralbl. f. Bakteriol. u. Parasit.*, 1894, xv. 133) has investigated the power of the typhoid bacilli to resist drying when mixed with earth, sand, cloth, and other similar substances which might be soiled by the dejecta of typhoid patients. Small portions of these substances, after being sterilized, were infected with bouillon cultures of the bacilli, and were set aside in the shade and kept at the ordinary room temperature. After a variable length of time nutrient gelatin was inoculated with small portions of the various substances. In this way the bacilli were found to have survived drying in garden earth for 21 days, in sand for 82 days, in sweepings from the house and the street for 30 days, on linen for 60 and 72 days respectively, on buckskin for 80 days, and on wood for 32 days. Uffelmann distinctly states that these numbers are not to be taken absolutely, for under somewhat different conditions of moisture of the atmosphere or of temperature, the viability of the bacilli might be quite distinctly longer. At all events these experiments show the power of the typhoid bacilli to resist drying for a very considerable time, and they suggest the possibility of the dried bacilli being blown about in dust from the room or clothes of those suffering from the fever, and of thus infecting milk, water, or other foods. Uffelmann thinks it very questionable whether the disease can be set up by bacilli drawn into the lungs in respiration.

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